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INCH-POUND

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SUPERSEDING
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COMMERCIAL ITEM DESCRIPTION

CONDUIT OUTLET BOXES, BODIES, AND ENTRANCE CAPS, ELECTRICAL: CAST METAL

The General Services Administration has authorized the use of this commercial item description for all federal agencies.

1. SCOPE. This commercial item description (CID) establishes the government acquisition requirements for cast metal conduit outlet boxes, bodies, and entrance caps for use with threaded and threadless rigid conduit, intermediate metallic conduit, and electrical metallic conduit. Outlet boxes may be used as wire outlets or as mountings for lamp holders, rosettes, switches, convenience outlets, to enclose wire splices, for mounting or enclosing surface wiring offsets, pull boxes, and other functions in conduit runs. Entrance caps provide a weather resistant service entrance for wires.

2. CLASSIFICATION. The conduit boxes, bodies, and entrance caps and outlets and devices shall be of the following types, designs, forms, styles, and hub sizes specified below:

2.1 Types. The outlet boxes and entrance caps shall be one of the following types (see 7.3(b)):

Type I - Conduit bodies that are essentially an enlarged section of conduit with hubs and access openings
Type II - Rectangular base general purpose conduit outlet boxes for wiring devices
Type III - Round base general purpose conduit boxes with threaded conduit hubs
Type IV - Round base weather resistant conduit outlet boxes, with threaded conduit hubs, for exposed installation
Type V - Round base explosion proof, dust-ignition-proof, and weather resistant conduit outlet boxes with threaded conduit hubs
Type VI - Entrance caps, electrical

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data that may improve this document should be sent to: STDZNMGT@dla.mil or Defense Logistics Agency - Aviation, ATTN: VEB, 8000 Jefferson Davis Highway, Richmond, VA 23297-5616. Since contact information can change, you may want to verify the currency of this address information using the ASSIST database at https://assist.dla.mil/.

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2.2 Designs. The outlet boxes and devices shall be one of the designs listed in table I.

TABLE I. Design configurations.

Design code	Configuration
01	Standard size wiring chamber with threaded hub connection for rigid conduit
02	Standard size wiring chamber with threadless hub connection for rigid conduit
03	Standard size wiring chamber with threadless hubs for electrical metallic tubing
04	Wiring chambers enlarged in both length and width and with threaded hub connection for rigid conduit
05	Wiring chamber with increased length and with threaded hub connection for rigid conduit
06	Wiring chamber with increased length and with threadless hub connection for electrical metallic tubing
07	Threaded hub connection for rigid conduit, shallow depth
08	Threaded hub connection for rigid conduit, deep depth
09	Threadless hub connection for rigid conduit, shallow depth
10	Threadless hub connection for rigid conduit, deep depth
11	Threadless hub connection for electrical metallic tubing, shallow depth
12	Threadless hub connection for electrical metallic tubing, deep depth
16	Nominal 4 inch (10.2 centimeters (cm)) diameter for exposed installation
18	Nominal 3 1/2 inch (8.9 cm) diameter
19	Nominal 4 5/8 inch (11.7 cm) diameter
20	3 1/2 inch (8.9 cm) diameter, threaded cover, plain base
21	4 1/4 inch (10.8 cm) diameter, threaded cover, plain base
22	5 3/4 inch (14.6 cm) diameter, threaded cover, flanged, mounting base
23	3 1/2 inch (8.9 cm) diameter, threaded cover, flanged, mounting base
25	3 1/2 inch (8.9 cm) diameter, cover attached by screws, plain base
26	4 5/8 inch (11.7 cm) diameter, cover attached by screws, plain base
27	Threaded hub connection for rigid conduit
28	Threadless hub connection for electrical metallic tubing
29	Threadless hub connection for rigid conduit

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2.3 Forms. The outlet boxes and devices shall be one of the forms listed in table II.

TABLE II. Form configurations.

Form code	Configuration
A	Single gang
B	Two gang parallel
C	Three gang parallel
D	Four gang tandem
E	Two gang tandem
F	With 3 wire (3-knockout) insulating cover
G	With 5 wire (5-knockout) insulating cover
H	With 7 wire (7-knockout) insulating cover
J	With 4 wire (4-knockout) insulating cover
K	With 6 wire (6-knockout) insulating cover

2.4 Styles. The outlets and devices shall be one of the styles listed in table III . The front shall be the surface where the access to the wiring chamber is located. Placing the hub end up and viewing toward the cover opening shall determine the right and left side.

TABLE III. Style configurations.

Style code	Configuration
AAA	One hub in the back
AAB	Two hubs in the back
BBB	One hub in one side
BBC	One hub in each end, mogul style
BLB	One hub in one end and one hub at a 90 degree angle at the opposite end in the back, mogul style
BUB	One hub at each end at a 45 degree angle, mogul style
BTB	One hub at each end and one hub on one side, mogul style
CCC	One hub in each end
CCA	One hub in each end and one hub in the back
CCB	One hub in one end and two hubs in the other
CCD	Two hubs in each end directly opposite
CCT	One hub in each end and one hub in a side (Type II)
EEE	One hub in one end

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TABLE III. Style configurations - Continued.

Style code	Configuration
LAA	One hub in one end and one hub in the right side, with cover on back
LLA	One hub in one end and one hub in the back
LLB	One hub in one end and one hub placed at a 90 degree angle at the opposite end in the back
LBD	One hub at one end and one hub at a 90 degree angle at the opposite end in the back with cover
LBL	One hub in one end and one hub in the back and left side at the opposite end
LBR	One hub in one end and one hub in the back and right side at the opposite end
LBF	One hub in one end and one hub placed at a 90 degree angle at the opposite end in the front
LFN	One hub in one end and one hub 90 degrees out in front at the opposite end with a mounting platform
LLL	One hub in one end and one hub placed at a 90 degree angle at the opposite end, on the left side
LLR	One hub in one end and one hub placed at a 90 degree angle at the opposite end on the right side
LRL	One hub in one end and one hub placed at a 90 degree angle at the opposite end on a side with access openings in both front and back
RRR	One hub in an end and one hub on the right side
SSS	Two hubs in one end
TTA	One hub in each end and one hub in a side (Type I)
TTB	One hub in each side and one hub in one end (Type II)
TAA	One hub in each end, one hub in a side, and a hub in the back
TBB	One hub in each end and one hub in the back
TAM	One hub in each end and one hub on one side with a mounting platform
UBB	One hub in each end, both hubs offset in the back at a 45 degree angle from the outlet centerline, with a projected included angle of 90 degreeS
XXX	One hub in each side and in each end

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2.5 Hub sizes. Hub sizes are related to type, design form, and style. Conduit hub sizes shall be one of the sizes listed in table IV.

TABLE IV. Hub sizes.

Size code	Dimension
A	1/2-inch (1.3 cm)
B	3/4-inch (1.9 cm)
C	1-inch (2.5 cm)
D	1 1/4-inches (3.2 cm)
E	1 1/2-inches (3.8 cm)
F	2-inches (5.1 cm)
G	2 1/2-inches (6.4 cm)
H	3-inches (7.6 cm)
J	3 1/2-inches (8.9 cm)
K	4-inches (10.2 cm)
L	5-inches (12.7 cm)
M	6-inches (15.2 cm)

3. SALIENT CHARACTERISTICS

3.1 Description. Conduit outlet boxes, bodies, and entrance caps shall consist of a cast metal body, a wiring chamber, and an access opening to the wiring chamber. All types shall have integral conduit hubs. Each hub shall have an integral end stop for the conduit or tubing, and shall provide a smooth, well rounded opening into the wiring chamber. Boxes without integral conduit hubs or end stops shall provide adequate room for the installation of a bushing.

3.2 Identical items. Conduit outlet boxes, bodies, and entrance caps of the same classification furnished under any specific contract shall be physically and mechanically identical. This requirement includes parts, assemblies, components, and accessories. No deviation will be acceptable without prior written approval of the contracting officer.

3.3 Design. Conduit outlet boxes, bodies, and entrance caps shall conform to Underwriters Laboratories (UL) 514, "Fittings for Cable and Conduit" (DoD adopted). In addition to complying with UL 514, type V outlet boxes shall comply with the applicable requirements of UL 1203, "Standard for Safety for Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations", covering installation in class I, division 1, groups C and D, and class II, division 1, groups E, F, and G locations as defined in National Fire Protection Association (NFPA) 70, "National Electrical Code" (DoD adopted).

3.4 Materials. Materials used shall be free from defects that would adversely affect the performance or maintainability of individual components or of the overall assembly.

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3.5 Construction. The construction of conduit outlet boxes, bodies, and entrance caps shall insure sufficient strength and rigidity in the finished product to enable the product to resist damage during shipment, rough handling, installation, and use.

3.5.1 Type I. Type I conduit bodies shall essentially be an enlarged section of conduit. Covers for conduit bodies of the same size supplied under the same contract shall be interchangeable.

3.5.2 Type II. Type II outlet boxes shall have two tapped No. 6, 32-threads-per-inch (32-threads-per-2.54 cm) device attaching screw holes located on 3 9/32-inch (8.3-cm) centers for each wiring device position. Covers for the same form supplied under the same contract shall be interchangeable.

3.5.3 Type III. Type III outlet boxes shall be cylindrical in shape and shall be designed to permit installation of standard 4-inch (10.2-cm) round outlet box covers with or without wiring devices. The outlet box surface mating with the cover shall be flat and smooth. Outlet boxes shall be designed for surface mounted installation.

3.5.4 Type IV. Type IV outlet boxes shall be cylindrical in shape and shall have surface mating with cover smooth, flat, and designed for the reception of a gasket. Holes for attaching a cover shall not communicate with the interior of the outlet box. Means shall be provided for attaching wiring devices or a fastening strap on which wiring devices can be mounted. When specified, outlet boxes shall be provided with mounting feet .

3.5.5 Type V. Type V outlet boxes shall be cylindrical in shape and designed for wiring in hazardous locations. Outlet boxes of design 20 through 23 shall be threaded for attachment of the cover, and the cover shall be provided with lugs or comparable devices to facilitate installation. When specified, the base of design 20, 21, 22, 25, and 26 outlet boxes shall be furnished with at least two lugs to permit screw or nail mounting. The base of the design 23 outlet box shall be extended to provide a mounting flange with four holes at quadrant intervals. Design 25 and 26 outlet boxes shall have the cover attached by not less than four screws spaced equidistant around the perimeter.

3.5.6 Type VI. Entrance caps shall essentially be a conduit terminating fitting at the point of service entrance connection. The entrance cap shall assure a rain-tight condition within the conduit when the service entrance wires are installed with the proper drip loop. Entrance caps shall be provided with insulating covers containing knockouts of sufficient size to accommodate the wire sizes applicable to the particular conduit size.

3.6 Threaded conduit hubs. Internal conduit threads shall be in accordance with FED-STD-H28/8, "Screw-Thread Standards for Federal Services Section 8 Dryseal Pipe Threads", for tapered pipe thread form, except for hubs on service entrance caps that may be straight thread form. The hubs of the outlet boxes and bodies shall be threaded in such a manner that the centerline of the conduit, when attached, shall be in alignment with the centerline of the hub.

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3.7 Covers. Blank covers, threaded hub covers, or special purpose covers, with or without gaskets as required, shall be furnished as specified. Mounting screws shall conform to American Society of Mechanical Engineers (ASME) B1.1, "Unified Inch Screw Threads (UN and UNR Thread Form)" (DoD adopted).

4. REGULATORY REQUIREMENTS

4.1 Recovered materials. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

4.2 Metric products. Products manufactured to metric dimensions will be considered on an equal basis with those manufactured using inch-pound units, provided they fall within specified tolerances using conversion tables contained in the latest version of FED-STD-376, "Preferred Metric Units for General Use by the Federal Government", and all other requirements of this CID including form, fit, and function are met. If a product is manufactured to metric dimensions and those dimensions exceed the tolerances specified in the inch-pound units, a request should be made to the contracting officer to determine if the product is acceptable. The contracting officer has the option of accepting or rejecting the product.

5. PRODUCT CONFORMANCE PROVISIONS

5.1 Product conformance. The products provided shall meet the salient characteristics of this CID, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered for sale in the commercial marketplace. The government reserves the right to require proof of such conformance.

5.2 UL certification. Contractor certifications shall include UL certification. Acceptable evidence of meeting the requirements of UL 514 and UL 1203 shall be the UL label, listing in the UL Electrical Appliance and Utilization Equipment List, or a certified test report from a recognized independent testing laboratory indicating that the fittings have been tested and conform to UL 514 and UL 1203.

5.3 Market acceptability. The product offered must have been previously sold either to the government or on the commercial market.

6. PACKAGING

6.1 Preservation, packing, and marking. Preservation, packing, and marking shall be as specified in the contract or order.

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7. NOTES

7.1 Part or identification number (PIN). The following PIN procedure is for government purposes and does not constitute a requirement for the contractor.

AA50563 - 2 07 A LLA B Example of reference part number:

- B — Hub size (see TABLE IV)
- LLA — Style (see TABLE III)
- A — Form (see TABLE II)
- 07 — Design (see TABLE I)
- 2 — Type (see 2.1)
  - 1 - Type I
  - 2 - Type II
  - 3 - Type III
  - 4 - Type IV
  - 5 - Type V
  - 6 - Type VI
- AA50563 — CID number

For example: AA50563-2 07 A LLA B, identifies a rectangular base general purpose conduit outlet box; threaded hub connection for rigid conduit, shallow depth; single gang; one hub in one end and one hub in the back; 3/4-inch hub size.

7.2 Sources of documents.

7.2.1 FAR. The FAR may be obtained from the Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Electronic copies of FAR documents may be obtained from https://www.acquisition.gov/far/.

7.2.2 Federal standards. Copies of federal standards may be obtained from General Services Administration, Federal Supply Service, Specification Section, 470 East L'Enfant Plaza SW, Suite 8100, Washington, DC 20407. Electronic copies of federal standards may be obtained from http://assist.dla.mil/quicksearch/.

7.2.3 ASME standards. Copies of ASME standards may be obtained from the American Society of Mechanical Engineers, Two Park Avenue, New York, NY 10016-5990. Electronic copies of ASME standards may be obtained from http://www.Customercare@asme.org/.

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7.2.4 NFPA standards. Copies of NFPA standards may be obtained from the National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Electronic copies of NFPA standards may be obtained from http://www.nfpa.org.

7.2.5 UL standards. Copies of UL standards may be obtained from Underwriter Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096. Electronic copies of UL standards may be obtained from http://www.ul.com .

7.3 Ordering data. Acquisition documents should specify the following information:

a. CID document number, revision, and CID PIN.
b. Type (see 2.1).
c. Design (see 2.2).
d. Form (see 2.3).
e. Style (see 2.4).
f. Hub size (see 2.5).
g. When the outlet boxes shall be furnished with mounting feet (see 3.5.4).
h. When the base of type V, designs 20, 21, 25, and 26 are to be furnished with at least two mounting lugs (see 3.5.5).
i. Type of cover required (see 3.7).
j. Preservation, packing, and marking requirements, if different (see 6.1).

7.4 Subject term (key word) listing.

cover
threaded hub
threadless hub
tubing
wiring chamber

7.5 Typical assemblies. Tables V through IX indicate normal availability of the various styles with respect to type, design, form, and size.

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TABLE V. Type I conduit bodies with designs and hub size groups where all hubs are the same size.

Hub size groups[1]						
Style	Design 1	Design 2	Design 3	Design 4	Design 5	Design 6
AAA	01, 02	-	-	-	-	-
BLB	-	-	-	-	02	-
BBC	-	-	-	-	02	-
BUB	-	-	-	-	02	-
LBD	01, 02, 03, 04	-	-	-	-	-
BBB	01, 02	-	-	-	-	-
BTB	-	-	-	-	02	-
CCC	01, 02	03	03	01, 02	01, 02	01, 02
EEE	01, 02	01	-	01, 02	01, 02	-
LLB	01	-	-	-	-	-
LBF	03	-	-	-	-	-
LLL	01, 02	01	01	01, 02	01, 02	01, 02
LLR	01, 02	01	01	01, 02	01, 02	01, 02
LRL	01, 02	03	03	-	-	-
TTA	01, 02	03	03	01, 20	01, 02	01, 02
TAA	03	-	-	-	-	-
TTB	03	-	-	-	-	-
UBB	03	-	-	-	-	01, 02
XXX	01	-	01	-	02	02

[1]Group 1 - Includes 1/2- (1.3 cm), 3/4- (1.9 cm), and 1-inch (2.54 cm) size hubs.
Group 2 - Includes 1- (2.54 cm), 1 1/4- (3.2 cm), 1 1/2- (3.8 cm), 2- (5.1cm), 2 1/2- (6.4 cm), 3- (7.6 cm), 3 1/2- (8.9 cm), and 4-inch (10.2 cm) size hubs.
Group 3 - Includes 1/2- (1.3 cm), 3/4- (1.9 cm), 1- (2.5 cm), 1 1/4- (3.2 cm), 1 1/2- (3.8 cm), and 2-inch (5.1 cm) size hubs.
Group 4 - Includes 5- (12.7 cm) and 6-inch (15.2cm) size hubs.

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TABLE VI. Type I, design 01, 02, and 03 conduit bodies with styles and hub size where hubs are not all the same size.

Style	Design	End	Side	End
TTA	01, 02, 03	1/2	1/2	1/2
	01, 02, 03	3/4	1/2	3/4
	01, 02, 03	3/4	3/4	3/4
	01, 02, 03	1	1/2	1
	01, 02, 03	1	3/4	1
	01, 02, 03	1	1	1
	01	1 1/2	1 1/4	1 1/4
	01	1 1/2	1 1/2	1 1/2
	01	2	2	2
	01	2 1/2	2 1/2	2 1/2
	01	3	3	3
	01	3 1/2	3 1/2	3 1/2
	01	4	4	4

TABLE VII. Type II outlet boxes with design with design and forms.

Style	Design	Form[1]	Hub sizes (inch)	Design	Form[1]	Hub sizes (inch)
AAA	07	A, B	1/2, 3/4, 1	08	A, B	1/2, 3/4, 1
AAB	07	A	1/2, 3/4, 1			
CCC	07, 09, 11	A, B, C, D, E	1/2, 3/4, 1	08, 10, 12	A, B, C, D	1/2, 3/4, 1
CCA	07	A	1/2, 3/4, 1	08	A	1/2, 3/4, 1
CCB	07	A, B	1/2, 3/4, 1	08	A, B	1/2, 3/4, 1
CCD	7	A	1/2, 3/4			
EEE	07, 09, 11	A, B, C, D	1/2, 3/4, 1	08, 10, 12	A, B, C, D	1/2, 3/4, 1
LAA	07	A	1/2, 3/4, 1	08	A	1/2, 3/4, 1
LLA	07	A	1/2, 3/4, 1	08	A	1/2, 3/4, 1
LBL	07	A	1/2, 3/4, 1			
LBR	07	A	1/2, 3/4, 1			
LFN	07	A	3/4			
RRR	07	A	1/2, 3/4, 1	08	A	1/2, 3/4, 1
SSS	07	A, B	1/2, 3/4, 1	08	A, B	1/2, 3/4, 1
TTA	07	A	1/2, 3/4, 1	08	A	1/2, 3/4, 1
TAM	07	A	3/4			
XXX	07	A	1/2, 3/4, 1	08	A	1/2, 3/4, 1

[1]Forms C and D have the number of hubs on the one end equal to the form number with one hub on the other end.

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TABLE VIII. Types III and IV outlet boxes with styles, sizes, forms, and designs.

Style	Hub size (inch)	Type III design	Type IV design
BBB	1/2, 3/4, 1	16	18, 19
CCC	1/2, 3/4, 1	16	18, 19
LAA	1/2, 3/4, 1	16	18, 19
TTA	1/2, 3/4, 1	16	18, 19
XXX	1/2, 3/4, 1	16	18, 19

TABLE IX. Type V outlet boxes with design, styles, and sizes.

Style	Design 20	Design 21	Design 22	Design 23	Design 25	Design 26
CCC	1/2, 3/4, 1	1 1/4	1 1/2, 2	1/2, 3/4, 1	1/2, 3/4, 1	1/2, 3/4, 1
CCA	1/2, 3/4, 1	-	1 1/4	-	-	-
EEE	1/2, 3/4, 1	1 1/4	1 1/2, 2	-	1/2, 3/4, 1	1/2, 3/4, 1
LAA	1/2, 3/4, 1	1 1/4	1 1/2, 2	1/2, 3/4, 1	1/2, 3/4, 1	1/2, 3/4, 1
LLA	1/2, 3/4	1 1/4	1 1/2, 2	-	-	-
TTA	1/2, 3/4, 1	1 1/4	1 1/2, 2	1/2, 3/4, 1	1/2, 3/4, 1	1/2, 3/4, 1
TAA	1/2, 3/4	-	-	-	-	-
XXX	1/2, 3/4, 1	1 1/4	1 1/2, 2	1/2, 3/4, 1	1/2, 3/4, 1	1/2, 3/4, 1

MILITARY INTERESTS:

Custodian:
Air Force - 99

CIVIL AGENCY
COORDINATING ACTIVITY:

GSA - 7FLE

Preparing Activity:
DLA – GS8

(Project 5975-2013-005)

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